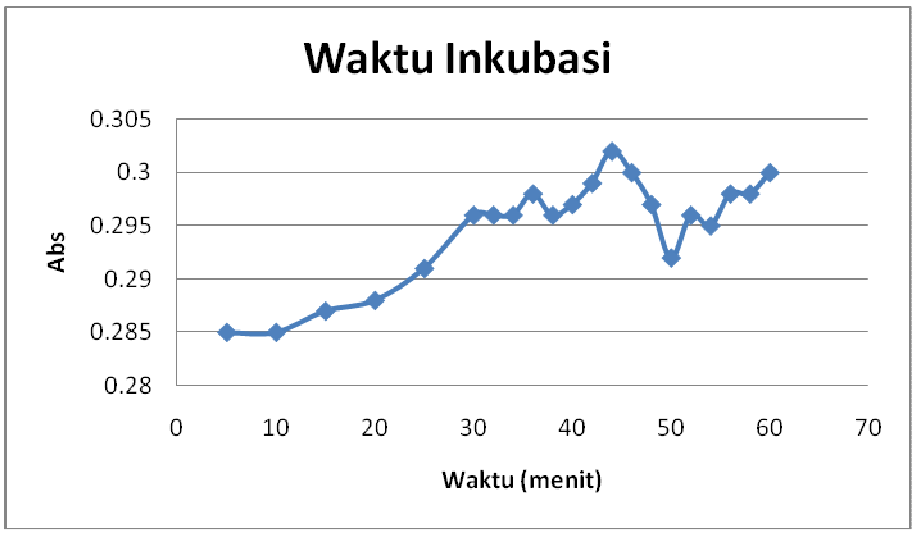
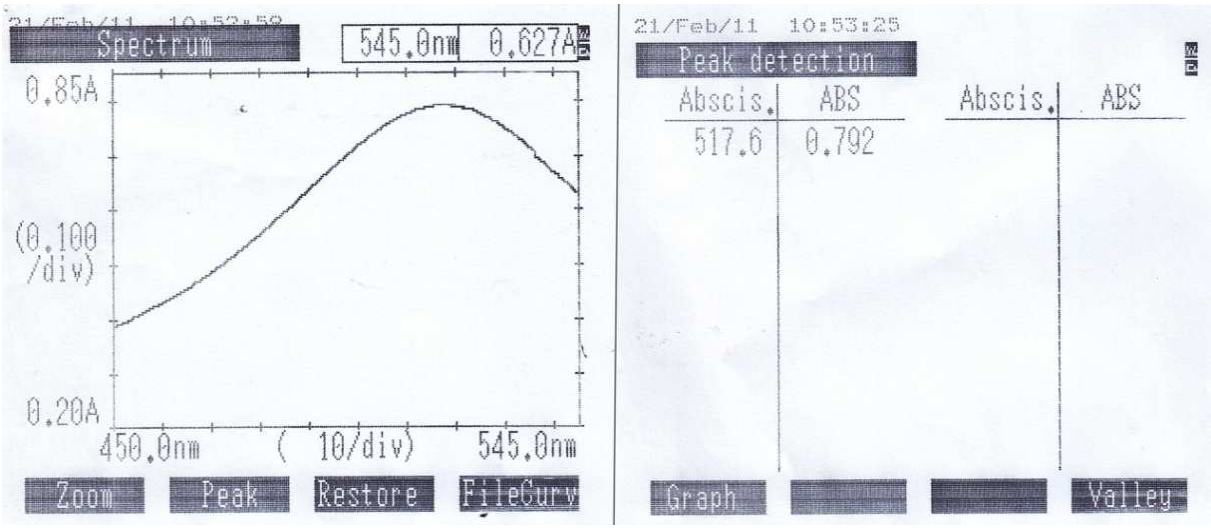
LAMPIRAN

Lampiran 1. Penentuan waktu inkubasi DPPH-Vitamin E



Jadi didapatkan waktu inkubasi 30-34 menit.

Lampiran 2. Penentuan Panjang Gelombang Maksimum DPPH



Lampiran 3. Contoh Perhitungan IC_{50} dari data *Melaleuca leucadendron* L

Replikasi 1 (konsetrasi stok 0,1%)

V.Pengam (µL)	Kadar sampel (µg/mL)	Absorbansi			% Antiradikal	Rerata % Antiradilkal ± SD
		f.koreksi	Sampel	Kontrol		
12,5	2,5	- 0,022	0,457	0,807	43,37	43,68 ± 0,438
			0,452		43,99	
25	5	- 0,022	0,391		51,54	51,49 ± 0,64
			0,392		51,43	
50	10	- 0,022	0,369		54,27	54,09 ± 0,262
			0,372		53,90	
125	25	- 0,022	0,287		64,43	64,43 ± 0
			0,287		64,43	
250	50	- 0,022	0,128		84,14	83,52 ± 0,877
			0,138		82,90	
Persamaan regresi linier: Y = 0,774x + 45,12 R = 0,989 IC_{50} = 6,305 µg/mL						

$$\%\ aktivitas\ antiadikal = \frac{(absorbansi\ kontrol - absorbansi\ sampel)}{absorbansi\ kontrol} \times 100\%$$

Contoh perhitungan % antiradikal:

% antiradikal = $\frac{0,807-0,457}{0,807} \times 100\% = 43,37\ \%$

Contoh Perhitungan IC50:

Y = 0,774X + 45,12

50 = 0,774X + 45,12

X = 6,305 µg/mL

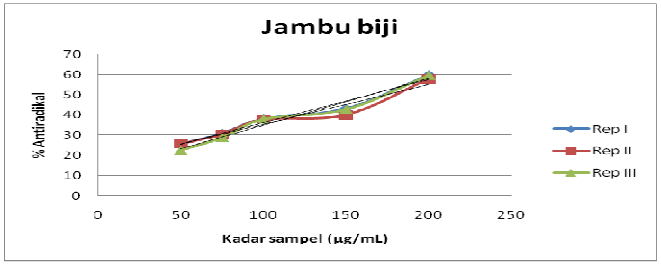
IC_{50} = 6,305 µg/mL

Lampiran 4. Hasil penenteuan IC_{50} Ekstrak etanol buah *Psidium guajava* L, *Melaleuca leucadendron* L, *Capsicum frutescens* L, *Anethum graveolens* L, dan Vitamin E

Ekstrak etanol buah *Psidium guajava* L (stok 0,1%)

V.Pengam (µL)	Kadar sampel (µg/mL)	Absorbansi							% Antiradikal		
		Faktor koreksi			Sampel			Kontrol	R1	R2	R3
		R1	R2	R3	R1	R2	R3				
250	50	0,031	0,032	0,032	0,632	0,630	0,661	0,807	25,53	25,65	22,06
					0,630	0,631	0,652		25,77	25,77	23,17
Rerata % Antiradilkal ± SD									22,61 ± 0,785	25,71 ± 0,085	22,61 ± 0,785
375	75	0,047	0,045	0,047	0,602	0,608	0,620		31,23	30,48	28,99
					0,608	0,608	0,621		30,48	30,48	28,87
Rerata % Antiradilkal ± SD									30,86 ± 0,530	30,48 ± 0	28,93 ± 0,085
500	100	0,059	0,057	0,058	0,553	0,567	0,554		38,78	37,05	37,55
					0,563	0,553	0,562		37,55	38,78	38,54
Rerata % Antiradilkal ± SD									38,16 ± 0,869	37,91 ± 1,223	38,04 ± 0,700
750	150	0,061	0,063	0,063	0,512	0,547	0,529		44,11	39,78	42,25
					0,527	0,542	0,519		42,26	40,40	43,49
Rerata % Antiradilkal ± SD									43,18 ± 1,308	40,09 ± 0,438	42,87 ± 0,877
1000	200	0.098	0,098	0,097	0,416	0,441	0,425		60,59	57,50	59,35
					0,428	0,435	0,419		59,10	58,24	60,01
Rerata % Antiradilkal ± SD									59,84 ± 1,053	57,87 ± 0,523	59,68 ± 0,467

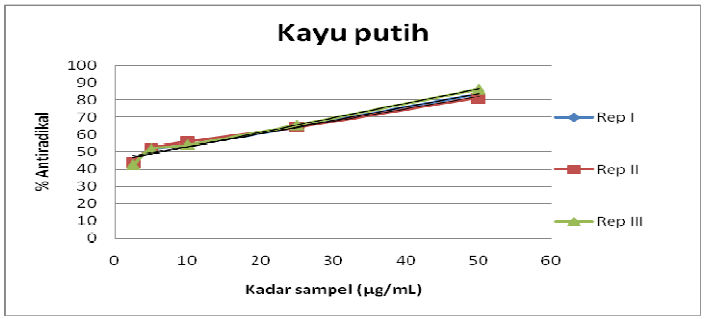
	Replikasi 1	Replikasi 2	Replikasi 3
Persamaan garis	Y = 0, 215x + 14,7642	Y = 0,1974x + 15,7046	Y = 0,232x + 11,652
R	0,9836	0,9659	0,9838
IC_{50}	163,583 µg/mL	173,735 µg/mL	164,723 µg/mL



Ekstrak etanol buah *Melaleuca leucadendron* L (stok 0,1 %)

V.Pengam (µL)	Kadar sampel (µg/mL)	Absorbansi							% Antiradikal		
		Faktor koreksi			Sampel			Kontrol	R1	R2	R3
		R1	R2	R3	R1	R2	R3				
12,5	2,5	- 0,008	-0,009	-0,009	0,457	0,454	0,467	0,807	43,37	42,74	42,13
					0,452	0,456	0,460		43,99	43,49	43,00
Rerata % Antiradilkal ± SD									43,68 ± 0,438	43,62 ± 0,175	42,56±0,613
25	5	- 0,019	-0,019	-0,019	0,391	0,389	0,389		51,54	51,80	51,80
					0,392	0,388	0,388		51,43	51,92	51,59
Rerata % Antiradilkal ± SD									51,49 ± 0,64	51,86 ± 0,088	51,86±0,088
50	10	- 0,021	-0,020	-0,020	0,369	0,355	0,375		54,27	56,01	53,53
					0,372	0,355	0,365		53,90	56,01	54,77
Rerata % Antiradilkal ± SD									54,09 ± 0,262	56,01 ± 0	54,86±0,876
125	25	- 0,025	-0,025	-0,025	0,287	0,288	0,274		64,43	64,31	66,05
					0,287	0,289	0,283		64,43	64,19	64,93
Rerata % Antiradilkal ± SD									64,43 ± 0	64,25 ± 0,088	65,49±0,788
250	50	- 0,030	-0,030	-0,030	0,128	0,150	0,111		84,14	81,41	86,24
					0,138	0,151	0,112		82,90	81,29	86,12
Rerata % Antiradilkal ± SD									83,52 ± 0,877	81,35 ± 0,88	86,18±0,088

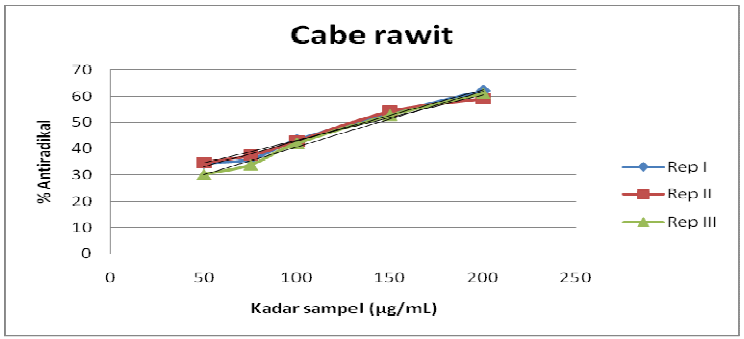
	Replikasi 1	Replikasi 2	Replikasi 3
Persamaan garis	Y = 0,774x + 45,12	Y = 0,715x + 46,17	Y = 0,840x + 44, 49
R	0,989	0,9808	0,9874
IC_{50}	6,305 µg/mL	5,357 µg/mL	6,595 µg/mL



Ekstrak Buah *Capsicum frutescens* L (stok 0,1 %)

V.Pengam (µL)	Kadar sampel (µg/mL)	Absorbansi							% Antiradikal		
		Faktor koreksi			Sampel			Kontrol	R1	R2	R3
		R1	R2	R3	R1	R2	R3				
250	50	0,009	0,010	0,008	0,537	0,541	0,573	0,807	34,57	34,20	29,99
					0,539	0,532	0,570		34,32	35,31	30,36
Rerata % Antiradilkal ± SD									34,45 ± 0,177	34,75 ± 0,785	30,17 ± 0,262
375	75	0,011	0,012	0,012	0,527	0,519	0,542		36,06	37,17	34,20
					0,527	0,512	0,547		36,06	38,04	33,58
Rerata % Antiradilkal ± SD									36,06 ± 0	37,60 ± 0,615	33,89 ± 0,438
500	100	0,025	0,027	0,025	0,481	0,490	0,493		43,49	42,63	42,01
					0,483	0,485	0,492		43,24	43,25	42,13
Rerata % Antiradilkal ± SD									43,37 ± 0,177	42,94 ± 0,438	42,07 ± 0,085
750	150	0,032	0,034	0,032	0,401	0,402	0,417		53,28	54,40	52,41
					0,401	0,404	0,411		54,27	54,15	53,04
Rerata % Antiradilkal ± SD									53,37 ± 0,700	54,27 ± 0,177	52,76 ± 0,445
1000	200	0,052	0,051	0,052	0,354	0,392	0,362		62,58	57,75	61,59
					0,361	0,370	0,372		61,71	60,64	60,35
Rerata % Antiradilkal ± SD									62,14 ± 1,455	59,11 ± 1,923	60,97 ± 0,877

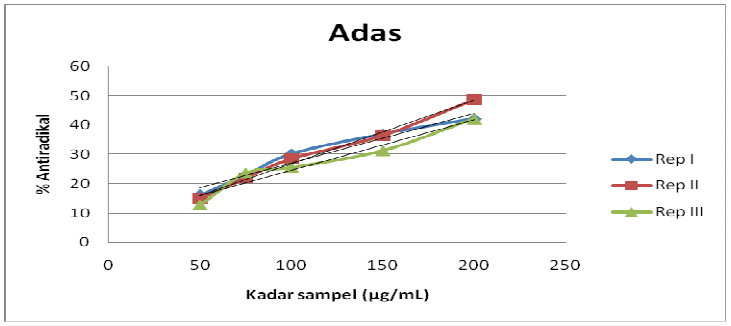
	Replikasi 1	Replikasi 2	Replikasi 3
Persamaan garis	Y = 0,195x + 23,49	Y = 0,173x + 25,77	Y = 0,212x + 19,60
R	0,987	0,978	0,989
IC_{50}	135,949 µg/mL	140,058 µg/mL	143,396 µg/mL



Ekstrak etanol buah *Anethum graveolens* L (stok 0,1%)

V.Pengam (µL)	Kadar sampel (µg/mL)	Absorbansi							% Antiradikal		
		Faktor koreksi			Sampel			Kontrol	R1	R2	R3
		R1	R2	R3	R1	R2	R3				
250	50	0,021	0,020	0,022	0,510	0,671	0,690	0,755	16,56	13,37	11,52
					0,657	0,656	0,670		15,76	15,76	14,17
Rerata % Antiradilkal ± SD									14,77 ± 1,407	14,77 ± 1,407	12,85 ± 1,874
375	75	0,023	0,024	0,023	0,620	0,645	0,626	0,786	24,04	20,99	23,28
					0,637	0,631	0,620		21,88	22,77	24,05
Rerata % Antiradilkal ± SD									22,96 ± 1,527	21,88 ± 1,259	23,67 ± 0,544
500	100	0,031	0,030	0,029	0,585	0,597	0,617		29,52	27,86	25,19
					0,574	0,587	0,610		30,92	29,13	26,08
Rerata % Antiradilkal ± SD									30,22 ± 0,989	28,49 ± 0,898	25,64 ± 0,629
750	150	0,050	0,051	0,050	0,549	0,556	0,586		36,51	35,75	31,81
					0,542	0,545	0,594		37,40	37,15	30,79
Rerata % Antiradilkal ± SD									36,69 ± 0,629	36,45 ± 0,989	31,30 ± 0,721
1000	200	0,072	0,071	0,070	0,517	0,523	0,530		43,38	42,49	41,47
					0,537	0,519	0,520		40,84	43,00	42,74
Rerata % Antiradilkal ± SD									42,11 ± 1,796	48,74 ± 0,639	42,11 ± 0,898

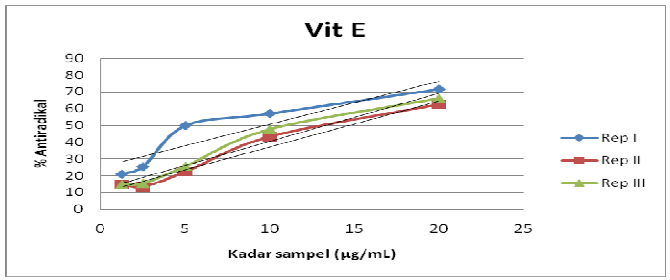
	Replikasi 1	Replikasi 2	Replikasi 3
Persamaan garis	Y = 0,169x + 10,244	Y = 0,182x + 7,879	Y = 0,173 + 7,221
R	0,975	0,970	0,971
IC_{50}	235,242 µg/mL	231,434 µg/mL	247,277 µg/mL



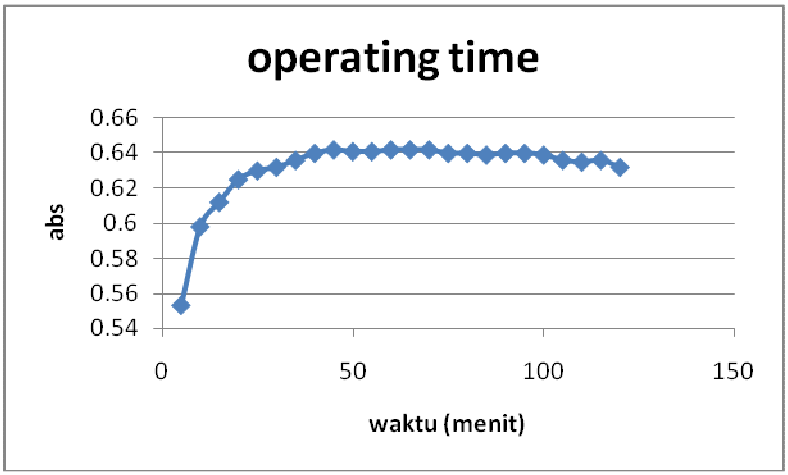
Vitamin E (stok 0,1%)

V.Pengam (µL)	Kadar sampel (µg/mL)	Absorbansi							% Antiradikal		
		Faktor koreksi			Sampel			Kontrol	R1	R2	R3
		R1	R2	R3	R1	R2	R3				
6,25	1,25	-	- 0,006	- 0,006	0,572	0,725	0,682	0,792	27,78	18,58	14
					0,647	0,650	0,684		18,31	18,03	13,75
					0,661	0,657	0,660		16,54	17,15	16,77
Rerata % Antiradilkal ± SD									20,87 ± 6,04	14,59 ± 5,22	14,84 ± 1,68
12,5	2,5	-	- 0,001	- 0,004	0,610	0,692	0,660		22,98	12,74	16,77
					0,628	0,679	0,675		20,70	14,38	14,88
					0,536	0,691	0,674		32,33	12,86	15
Rerata % Antiradilkal ± SD									25,34 ± 6,16	13,33 ± 0,91	15,55 ± 0,06
25	5	-	- 0,005	- 0,004	0,438	0,614	0,575		44,69	22,57	27,49
					0,358	0,590	0,622		54,79	25,6	21,56
					0,397	0,648	0,570		49,87	18,29	28,12
Rerata % Antiradilkal ± SD									49,78 ± 5,05	22,15 ± 3,67	25,72 ± 3,62
50	10	-	- 0,005	- 0,005	0,380	0,444	0,397		52,02	44,01	49,94
					0,393	0,454	0.407		50,38	42,75	48,68
					0,249	0,453	0.437		68,56	42,88	44,89
Rerata % Antiradilkal ± SD									56,99 ± 10,06	43,21 ± 0,69	47,84 ± 2,63
100	20	-	- 0,003	- 0,004	0,290	0,298	0,247		63,38	62,42	68,85
					0,213	0,352	0,289		73,10	55,61	63,56
					0,175	0,242	0,267		77,90	69,48	66,33
Rerata % Antiradilkal ± SD									71,46 ± 7,4	62,5 ± 5,94	66,25 ± 2,65

	Replikasi 1	Replikasi 2	Replikasi 3
Persamaan garis	Y = 2,572X + 24,954	Y = 2,7403X + 9,9188	Y = 2,8833X + 11,694
R^2	0,8381	0,9694	0,9628
IC_{50}	9,737 µg/mL	14,627 µg/mL	13,286 µg/mL

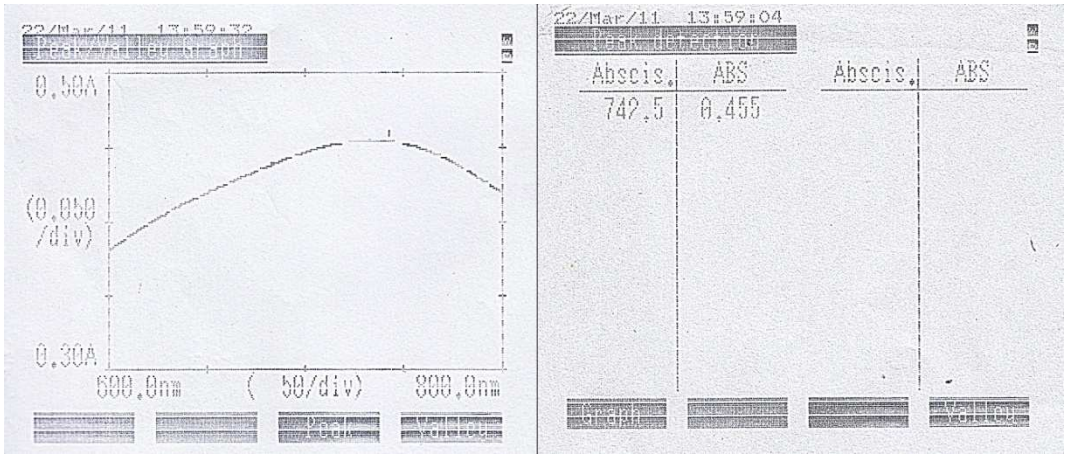


Lampiran 5. Penentuan *Operating Time* Asam galat



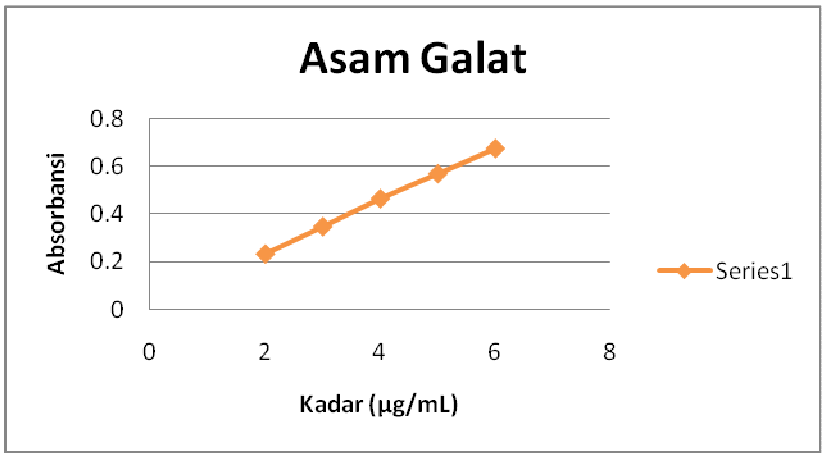
Jadi didapatkan *operating time* : 40-80 menit

Lampiran 6. Penentuan Panjang Gelombang Maksimum Asam Galat



Lampiran 7. Penetapan Kurva Baku Asam Galat

Kadar (µg/mL)	Abs		Rerata Abs ± SD
	R.1	R.2	
2	0,247 0,213	0,232 0,247	0,235 ± 0,01
3	0,345 0,319	0,374 0,357	0,349 ± 0,002
4	0,446 0,459	0,493 0,464	0,466 ± 0,002
5	0,557 0,576	0,570 0,576	0,570 ± 0,01
6	0,654 0,664	0,675 0,707	0,675 ± 0,02
Kurva baku: Y = 0,1101X + 0,0186			



Lampiran 8. Contoh perhitungan kadar fenolik total

Sampel	Pembngn (mg)	F. P	Abs			GAE (mg/g sampel)			Rerata GAE ± SD
			R1	R2	R3	R1	R2	R3	
Psidium guajava L	50	50 x	0,279	0,289	0,257	23,65	24,56	23,29	23,73 ± 0,6427
			0,273	0,287	0,276	23,11	24,38	23,38	
			Rerata			23,38	24,47	23,33	
Melaleuca leucadendron L	10		0,580	0,573	0,596	254,95	251,77	262,22	257,34 ± 2,5105
			0,562	0,559	0,602	264,77	254,41	264,94	
			Rerata			259,86	248,59	263,58	
Capsicum frutescens L	50		0,240	0,250	0,263	20,11	21,02	22,20	21,44 ± 0,2980
			0,250	0,260	0,265	21,02	21,93	22,38	
			Rerata			20,56	21,47	22,29	
Anethum graveolens L	50		0,149	0,152	0,147	11,84	12,12	11,66	11,78 ± 0,0367
			0,142	0,160	0,140	11,21	12,84	11,03	
			Rerata			11,52	12,48	11,34	

Kurva baku : Y = 0,1101X + 0,0186

Kadar fenol ekstrak etanol buah *Psidium guajava* L :

Absorbansi (Y) = 0,279

Y = 0,1101X + 0,0186

0,279 = 0,1101X + 0,0186

X = 2,365 µg/ml

Faktor pengenceran (Fp) = $\frac{5\ mL}{0,1\ mL}$ = 50 x

Kadar asam galat dalam 1 ml sampel:

= 2,365 µg/mL x Fp

= 2,365 µg/mL x 50

= 118,25 µg/mL

Kadar asam galat dalam stok :

= $\frac{118,25\ \mu g/mL}{50\ mg/10\ mL}$

= $\frac{118,25\ \mu g/mL}{0,5\ g/100\ mL}$

= $\frac{11,825\ mg}{0,5\ g}$

= $\frac{11,825\ mg}{0,5\ g}$

Kadar asam galat dalam 1 gram sampel:

= $\frac{1\ g}{0,5\ g}$ x 11,825

GAE = 23,65 mg/g sampel